

CLAIMS

WHAT IS CLAIMED IS:

1. A system for communications, comprising:
a transport layer/network layer processing stack; and
an intermediate driver coupled to the transport layer/network layer processing stack via a first miniport and a second miniport,
wherein the first miniport supports teaming, and
wherein the second miniport is dedicated to a system that can offload traffic from the transport layer/network layer processing stack.
2. The system according to claim 1, further comprising:
a first network interface card coupled to the intermediate driver; and
a second network interface card coupled to the intermediate driver,
wherein the second network interface card supports the system that can offload traffic from the transport layer/network layer processing stack, and
wherein the first miniport, the first network interface card and the second network interface card support teaming
3. The system according to claim 2, wherein the first network interface card comprises a plurality of network interface cards.
4. The system according to claim 2, wherein the second network interface card comprises a remote-direct-memory-access-enabled (RDMA-enabled) network interface card.
5. The system according to claim 2, wherein the second network interface card is the only network interface card that supports traffic from the system that can offload traffic from the transport layer/network layer processing stack.

6. The system according to claim 1, wherein the transport layer/network layer processing stack comprises a transmission control protocol/internet protocol (TCP/IP) stack.

7. The system according to claim 1, wherein the first miniport comprises a virtual miniport instance.

8. The system according to claim 7, wherein the virtual miniport instance comprises a virtual miniport instance adapted for teamed traffic.

9. The system according to claim 1, wherein the second miniport comprises a virtual miniport instance.

10. The system according to claim 9, wherein the virtual miniport instance comprises an RDMA-enabled virtual miniport instance.

11. The system according to claim 1, wherein the system that can offload traffic from the transport layer/network layer processing stack comprises a Winsock Direct system.

12. The system according to claim 1, wherein the second miniport supports traffic that is processed by the transport layer/network layer processing stack.

13. The system according to claim 1, wherein the second miniport supports traffic that has not been offloaded by the system that can offload traffic from the transport layer/network layer processing stack.

14. The system according to the claim 1, wherein traffic that has been offloaded by the system that can offload traffic from the transport layer/network layer processing stack bypasses the transport layer/network layer processing stack and the intermediate driver.

15. The system according to claim 1, wherein the intermediate driver supports teaming.

16. The system according to claim 1, wherein the intermediate driver comprises a network driver interface specification (NDIS) intermediate driver.

17. The system according to claim 1, wherein the intermediate driver is aware of the system that can offload traffic from the transport protocol/network protocol processing stack.

18. The system according to claim 1, wherein teaming supports load balancing.

19. The system according to claim 1, wherein teaming supports fail over.

20. The system according to claim 1, wherein teaming supports virtual network capabilities.

21. A system for communications, comprising:

a first set of network interface cards comprising a second set and a third set, the second set comprising a network interface card that is associated with a system that is capable of offloading one or more connections, the third set comprising one or more network interface cards; and

an intermediate driver coupled to the second set and to the third set, the intermediate driver supporting teaming over the second set and the third set.

22. The system according to claim 21, wherein the system that is capable of offloading one or more connections is associated only with the second set.

23. The system according to claim 21,

wherein the system that is capable of offloading one or more connections offloads a particular connection, and

wherein packets carried by the particular offloaded connection bypass the intermediate driver.

24. The system according to claim 21, wherein intermediate driver supports teaming over the first set.

25. The system according to claim 21, further comprising:
a host protocol processing stack coupled to the intermediate driver via a first virtual miniport instance and a second virtual miniport instance,

wherein the first virtual miniport instance is associated with traffic of the second set and the third set, and

wherein the second virtual miniport instance is associated solely with traffic of the third set.

26. A method for communicating, comprising:
(a) teaming a plurality of network interface cards; and
(b) associating at least one network interface card of the plurality of network interface cards with a system that is capable of offloading one or more connections.

27. The method according to claim 26, wherein (b) comprises solely associating the system that is capable of offloading one or more connections with a single network interface card of the plurality of network interface cards.

28. A method for communicating, comprising:
teaming a plurality of network interface cards of a host computer;
adding an additional network interface card to the host computer, the additional network interface card supporting a system that is capable of offloading traffic from a host protocol processing stack; and

teaming the plurality of network interface cards and the additional network interface card.

29. The method according to claim 28, further comprising:

handling packets of a particular connection only via the additional network interface card, the particular connection being maintained by the system that is capable of offloading traffic from the host protocol processing stack.

30. The method according to claim 28, wherein the additional network interface card, which has been teamed with the plurality of network interface cards, is not solely associated with the system that is capable of offloading traffic from the host protocol processing stack.

31. The method according to claim 28, further comprising:

processing packets of a particular connection via the host protocol processing stack, the particular connection not being an offloaded connection although being maintained by the system that is capable of offloading traffic from the host protocol stack.

32. The method according to claim 31, further comprising:

transmitting the processed packets only through the additional network interface card.